

What is Claimed Is:

1. A pressure transducer comprising:
 - a carrier having a central aperture for receiving fluid from a vessel;
 - a sense die mounted on the carrier, the sense die having a first side positioned to interact with the fluid received from the vessel;
 - pressure-sensing circuitry formed on a second side of the sense die not exposed to the fluid; and
 - a non-metal covering for protecting the pressure-sensing circuitry.
2. The pressure transducer of claim 1, wherein the carrier is mounted within a housing positioned and configured to confine fluid, entering the housing from the vessel, to the central aperture, contacting the circuitry.
3. The pressure transducer of claim 1, wherein the first side of the sense die has a surface area at least equal to a cross-sectional surface area of the central aperture, the sense die being positioned on the carrier to cover the central aperture.
4. A pressure transducer comprising:
 - a carrier having a central aperture for receiving fluid from a vessel;
 - a sense die mounted on the carrier, the sense die having a first side positioned to interact with a fluid received from the vessel; and
 - a gel forming a bond between the first side of sense die and the carrier.
5. The pressure transducer of claim 4, wherein the carrier is mounted within a housing positioned and configured to confine fluid entering the housing to the central aperture.
6. The pressure transducer of claim 4, wherein the first side of the sense die has a surface area at least equal to a cross-sectional area of the central aperture, the sense die having the bond formed between the first side and a periphery surface of the central aperture.
7. A pressure transducer comprising:
 - a carrier having a central aperture for receiving fluid from a vessel;

a sense die mounted on the carrier having a first side positioned to interact with the fluid received from the vessel;

pressure-sensing circuitry formed on a second side of the sense die; and

a hermetically-sealed cover positioned to prevent the fluid or other external elements from contacting at least the second side of the sense die.

8. The pressure transducer of claim 7, wherein the cover is configured to allow fluctuations of pressure of the defined volume relative to pressure external to the pressure transducer.

9. The pressure transducer of claim 7, further comprising a valve in the cover having at least two positions, a first position for allowing fluctuations in pressure, and a second position for preventing fluctuations in pressure.

10. The pressure transducer of claim 9, wherein the carrier is mounted within a housing positioned and configured to confine fluid entering the housing to the central aperture.

11. A pressure transducer, comprising:

a carrier having a central aperture for receiving fluid from a vessel;

a sense die mounted on the carrier, the sense die having a first side positioned to interact with the fluid received from the vessel;

pressure-sensing circuitry formed on a second side of the sense die not exposed to the fluid; and

a ceramic board mounted on the carrier, the ceramic board bearing conductive paths electrically connecting the pressure-sensing circuitry to external circuitry.

12. The pressure transducer of claim 11, wherein the conductive paths are formed within the ceramic board and have a first set of contacts for electrically connecting to the pressure-sensing circuitry and a second set of contacts for electrically connecting to the external circuitry.

13. The pressure transducer of claim 11, the ceramic board comprising:

at least a first and a second layer, wherein the first layer includes at least a first conductive path electrically connected to at least the pressure-sensing circuitry, and the second layer includes at least a second conductive path in contact with the first conductive path.

14. The pressure transducer of claim 13, wherein the second conductive path electrically connects to the external circuitry.

15. The pressure transducer of claim 13, wherein the first conductive path electrically connects to the external circuitry.

16. The pressure transducer of claim 13, wherein the first conductive path passes from one side of the first layer to an opposite side, and the second conductive path is formed along a surface of the second layer.

17. The pressure transducer of claim 16, wherein the first layer is secured to the second layer, the second conductive path being contained between the first layer and second layer.

18. The pressure transducer of claim 11, further comprising
a non-metal cover positioned to prevent the fluid or other external elements from contacting the second side of the sense die, and hermetically-sealed.

19. The pressure transducer of claim 11, wherein the carrier is mounted within a housing positioned and configured to confine fluid entering the housing to the central aperture.

20. The pressure transducer of claim 19 further comprising:
a lid hermetically-sealed to an access opening to the containment area of the housing.

21. A pressure transducer comprising:
a carrier having a central aperture for receiving fluid from a vessel;
a sense die mounted on the carrier having a first side positioned to interact with the fluid received from the vessel;
a gel attaching the sense die to the carrier;

a pressure-sensing circuitry formed on a second side of the sense die not exposed to the fluid;

a ceramic board mounted on the carrier, the ceramic board having conduction paths electrically connecting the pressure-sensing circuitry; and

a hermetically-sealed cover positioned to prevent the fluid or other external elements from contacting at least the second side of the sense die.

22. The pressure transducer according to claim 4, wherein the gel maintains the bond from a temperature of -40 to 150 degrees Celcius.

23. The pressure transducer according to claim 4, wherein the gel maintains the bond from a pressure of -14 to 15 pounds per square inch.